11 August 1967
552-552A-OD-337

PROGRESS REPORT - 552 and 552A
For July 1967

552-101

Work performed on this system during this reporting period was to repair the compressor-vacuum pump. Investigation of unusual compressor noise found cracked inner races of (2) connecting rods ball bearings. A local supplier in Washington D. C. rebuilt the compressor and by borrowing vacuum pump parts from 552A #101, the 552 system was operational on July 24, 1967.

The above effort completes work on this system as lens centering effort in June proved satisfactory by confirming optical axis shift of the 3 higher magnification objectives to within 20 micron diameter point mark.

Work on Laser Point Marking in May significantly improved marking quality and reliability by modifying laser power supply and trigger electronics, increasing capacity of line regulation, replacing one crystal and adding an optical adjustment to aid alignment of laser output. The result of this work was to make system's point marking capability acceptable by customer.

Therefore, with the refinements on point marking, lens centering and compressor breakdown, system was accepted by customer.

The manual reproducible drawings and spare parts list (in manual) will be delivered in August to complete deliverable items of this contract.

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552A #104

Several trips were made during July to complete installations of this system. Work consisted of revising circuits in motorized film drive in the following areas:

1. Powered loop withdrawal brake release to prevent restraint of idling film drive on supply spool side, by spool brakes.
2. Prevention of excess film tension at completion of loop withdrawal. With high speed drive operation to reduce loop length, film could be stalled against a locked spool causing light film tension and a drive overload. The drive is stopped before zero loop is obtained and loop mechanism has to be put in "return" mode to complete loop withdrawal.
3. Prevention of film drive stall on fixed side in loop forming mode. By eliminating possible drive operation of brake, spool in loop forming operation film drive cannot be overloaded.
4. Power assist mode drive reversal permits system to handle all film windings on spools customer uses. Operation in reverse direction requires proper setting of mechanical controls at spool spindles.

During film drive trials, film scratching by center holddown was noticeable. We are refinishing the spring fringes on the holddown bars and completed holddown rework should be installed in August. At that time, air pressure below film will be reduced to further reducing scratching.

ENCLOSURE

Financial Report for the month of July is attached.

WWB:maj

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